



VEEDER-ROOT INSTALLATION INSTRUCTIONS

Technical Manual
9-003
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Manual No. 251490
Rev. C

METER REGISTER / PRINTER / PRESET INTERLOCK SWITCH KIT NO. 312020-719, 409077-729

GENERAL

These instructions are for installation of a kit that adds a switch to the meter register to sense when the register is being reset. When wired to controls and relays as indicated in these instructions, the switch can be used to a) require the register to be completely reset before the pump motor can be started, and b) turn off the pump motor when a reset is attempted and the pump motor is running.

NOTE: This kit can be adapted to any Veeder-Root Series 7886, 7887, 7890, 7891 & 7892 Meter Register / Printer / Preset Products.

Vertical black bars next to the text or figures in this manual indicate that information was added or changed.

Parts List 312020-719 Kit (UL, CSA Style)

Item No.	Part No.	Description	Qty.
1	327640-001	Slider	1
2	510020-001	Lockwasher	3
3	786880-001	Switch Assembly	1
4	503368-001	1/4 x 20 Screw	3
5	328003-001	Cam Group	1
6	328035-001	Template	1
7	251490	Instructions	1

Item	Part No.	Description	Qty
1	327640-001	Slider	1
2	328003-001	Cam Group	1
3	328035-001	Template	1
4	510013-001	Lockwasher	3
5	405471-437	Screw	3
6	786860-001	Switch Assy	1
7	251490	Instructions	1

INSTALLATION PROCEDURE

WARNING: IF PRINTER AND METER REGISTER ARE USED WITH ANY ELECTRICAL DEVICES, SUCH AS A PRESET KNOCKOFF OR PULSER, TURN OFF POWER AND TAKE OTHER NECESSARY PRECAUTIONS TO PREVENT PERSONAL INJURY, PROPERTY LOSS, AND EQUIPMENT DAMAGE.

1. Remove the meter register frame from case by removing three bolts from the register bottom. (On Register / Printer combination units, printer cover and knob assembly must be disassembled prior to Register / Printer chassis removal and drilling register case.)

CAUTION: BEFORE DRILLING, REMOVE THE METER REGISTER CASE TO A NON-HAZARDOUS AREA. MAKE SURE ALL METAL PIECES HAVE BEEN REMOVED BEFORE PROCEEDING.

2. Drill the meter register case according to the dimensions in Figure 1. A drill template is provided in the kit.

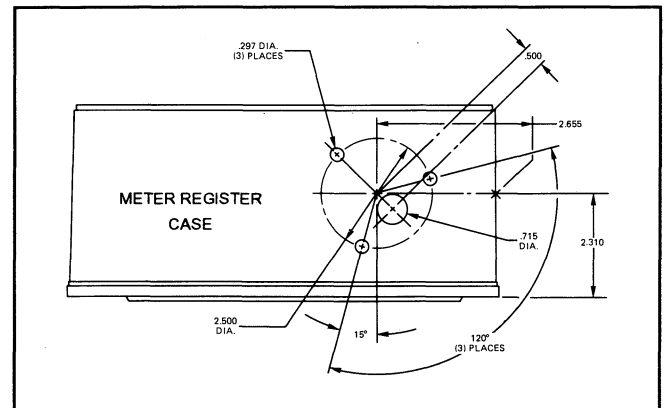


Figure 1. Drilling Dimensions.

3. Reset the register so that the display shows all zeros.
4. Remove gear from left end of wheel shaft by removing groove pin.

CAUTION: SUPPORT THE SHAFT WHILE DRIVING THE PIN OUT TO PREVENT BENDING THE SHAFT.

5. Drill out existing hole in shaft with #33 drill (.113 dia.) for set screw clearance. Install the cam group provided in the kit onto the meter register wheel shaft with the timing hole at the top center and secure with the set screw as shown in Figure 2.

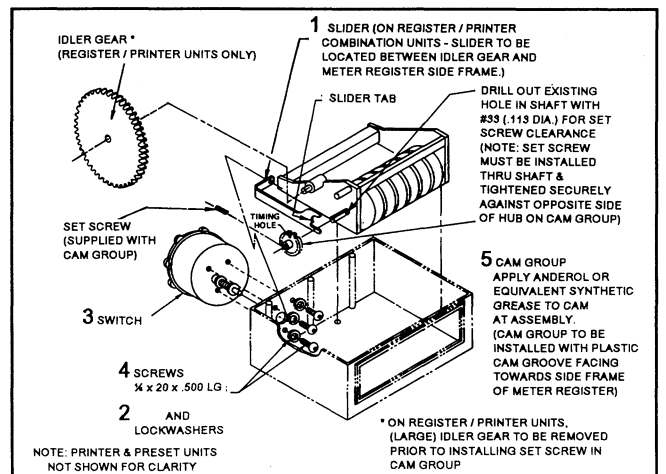


Figure 2. Kit Assembly.

6. Install the slider end into the plastic cam groove. Lubricate the cam with Anderol L-795 grease or equivalent.
7. Replace the meter register frame onto the case and re-assemble using the three bottom screws.
8. Insert the switch shaft through the housing and through the hole in the slider. Assemble using three screws and lockwashers as shown.
9. Check alignment of the slider tab with the cam surface. (See Figure 2.) The tab should be in contact with the cam surface, and the slider **should move freely** back and forth.

SWITCH OPERATION CHECK

1. Using an electrical continuity checker, check operation of the switch during reset.
2. Measure the continuity between red and black wires.
3. The switch should open (no continuity) after the shutter has dropped in front of the display, and close (continuity) at the end of the reset cycle.
4. If necessary, adjust the switch actuation point as follows:
 - a. Unscrew the explosion-proof housing cover.
 - b. Slightly loosen the two screws securing the switch plate. See Figure 3.

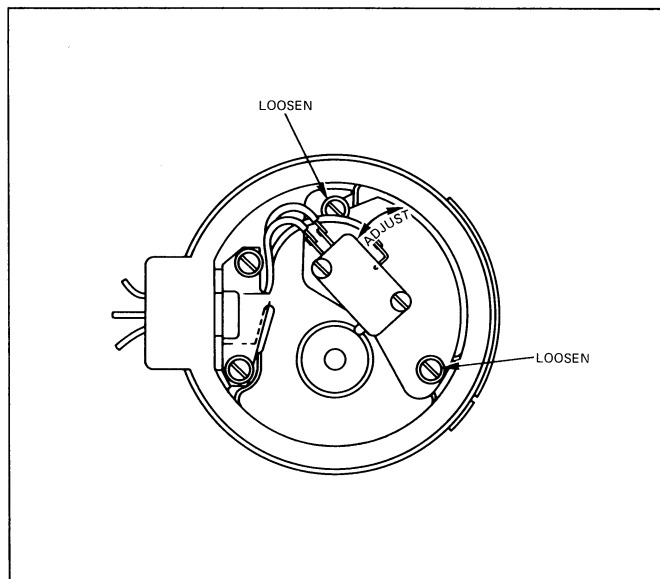


Figure 3. Switch Adjustment.

- c. Move the plate radially in or out until the proper setting is reached.
- d. Tighten screws and replace the cover tightly.

SWITCH WIRING

WARNING: MAIN POWER MUST BE DISCONTINUED BEFORE INSTALLING SWITCH LEADS.

NOTE: See National Electric Code for size of wire, number of wires allowed in conduit, and conduit sealing requirements.

1. Switch is spdt with capacity of 115 Vac or 230 Vac, 50/60 Hz, at 15 A; 125 Vdc at 1/2 A; 250 Vdc at 1/4 A. Use wires provided.
2. See Figure 3 for switch wires. The normally closed (N.C.) terminal makes contact with the common terminal during operation and opens during reset. The normally open (N.O.) terminal makes contact only during reset.

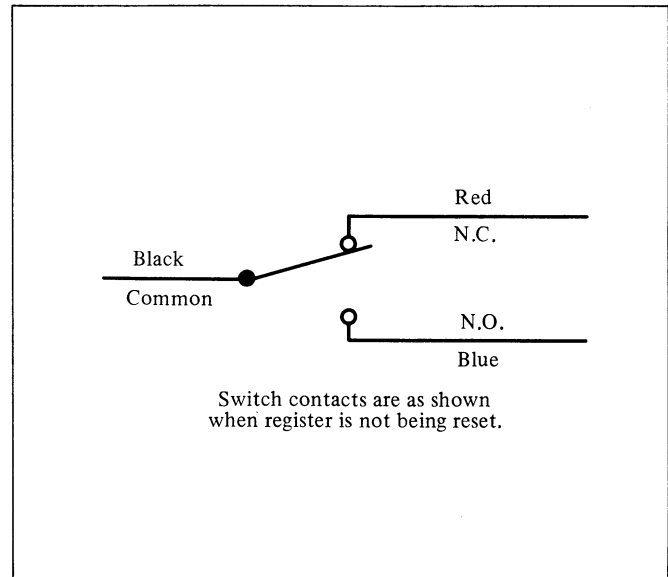


Figure 4. Switch Connections.

3. See Figure 4 for recommended wiring to controls and relays. Only the Interlock Switch is provided in this kit.

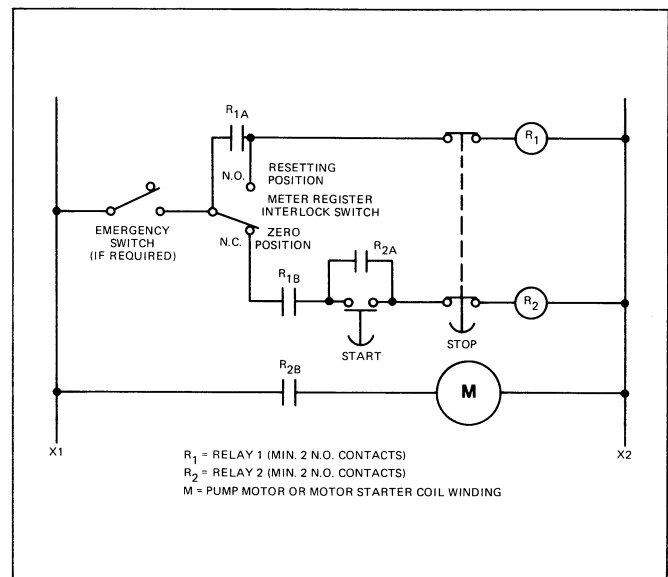


Figure 5. Switch and Relay Wiring to Pump Motor.

NOTE: To provide maximum protection, install the START switch so that the operator can not reach it while resetting the register.

DAMAGE CLAIMS AND WARRANTY

A. DAMAGE CLAIMS

1. Thoroughly examine the enclosure as soon as it is received. If damaged, write on the face of the freight bill a complete and detailed description of the damage. Have the carrier's agent sign the description.

Note: Insist that the carrier's agent verify the inspection and sign the description.

2. Immediately notify the delivering carrier of damage or loss. This notification may be given either in person or by telephone. Written confirmation must be mailed within 48 hours. Railroads and motor carriers are understandably reluctant to make adjustments for damaged merchandise unless inspected and reported promptly.

3. Risk of loss of, or damage to merchandise remains with the Buyer. It is the Buyer's responsibility to file a claim with the carrier involved.

4. Immediately advise your Veeder-Root representative, distributor, or the factory so that we may assist you.

B. RETURN SHIPPING. All shipments of Veeder-Root products must be prepaid. Equipment must be packed in a strong exterior container and surrounded by shock absorbing material. Veeder-Root will accept no liability for damage caused by improper packing. It is suggested that the original shipping container be used if it is available. Address shipment to Veeder-Root Co., 6th Avenue at Burns Crossing, P.O. Box 1673, Altoona, PA 16603.

C. WARRANTY AND CONDITIONS

1. WARRANTY. We warrant that our products shall be free from defects in material and workmanship for a period of one year from the date of shipment thereof or the product's total rated life, whichever first occurs. Within the warranty period we shall repair or replace such products which are returned to us with shipping charges prepaid and which are determined by us to be defective. This warranty will not apply to any product which has been subjected to misuse, negligence, or accident; or misapplied; or used in violation of product manuals, instructions, or warnings; or modified or repaired by unauthorized persons; or improperly installed.

2. INSPECTION. You shall inspect the product promptly after receipt and shall notify us at our Simsbury office, in writing, of any claims, including claims of breach of warranty, within thirty days after you discover or should have discovered the facts upon which the claim is based. Your failure to give written notice of a claim within the time period shall be deemed to be a waiver of such claim.

3. LIMITATION OF REMEDY AND WARRANTY. The provisions of Paragraph 1 are our sole obligation and exclude all other remedies or warranties, express or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, whether or not purposes or specifications are described herein. We further disclaim any responsibility whatsoever to you or to any other person for injury to person or damage to or loss of property or value caused by any product which has been subjected to misuse, negligence, or accident; or misapplied; or used in violation of product manuals, instructions, or warnings; or modified or repaired by unauthorized persons; or improperly installed.

4. LIMITATION OF DAMAGES. Under no circumstances shall we be liable for any incidental, consequential or special damages, losses or expenses arising from this contract or its performance or in connection with the use of, or inability to use, our product for any purpose whatsoever.

5. LIMITATION OF ACTIONS. No action regardless of form arising out of this contract may be commenced more than one year after the cause of action has accrued, except an action for nonpayment.

6. COLLATERAL PROMISES. There are no representations, warranties, or conditions express or implied, statutory or otherwise except those herein contained, and no agreements or waivers collateral hereto shall be binding on either party unless in writing and signed by you and accepted by us at our Simsbury office.

7. INTERPRETATION. Rights and liabilities arising out of any contract with us shall be determined under the Uniform Commercial Code as enacted in Connecticut.



6th Avenue at Burns Crossing, P.O. Box 1673, Altoona, PA 16603-1673 Phone (814) 695-4476, or (800) 873-3313, Fax (814) 695-7605, or (800) 234-5350

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